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| 10/601,687 | 06/23/2003 | Thomas C. Russell | EID0101 | 7982 |
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| American Air Liquide, Inc. Intellectual Property Dept. 2700 Post Oak Boulevard Suite 1800 Houston, TX 77056 | | | EXAMINER GAMIL TEJAL | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/601,687

Applicant(s)

RUSSELL ET AL.

Examiner

TEJAL J. GAMI

Art Unit

2121

Period for Reply
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) 7-10, 12 and 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/07/10
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is responsive to a REQUEST FOR CONTINUED EXAMINATION entered September 7, 2010 for the patent application 10/601687.

Status of Claims

2. Claims 1-6 and 21-23 were rejected in the last Office Action dated September 2, 2009.

Claims 7-10, 12, and 14-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

As a response to the June 7, 2010 office action, Applicant has Amended claims 1 and 5.

Claims 1-6 and 21-23 now remain under consideration in this Office action. Applicant is reminded that the non-elected claims 7-10, 12, and 14-20 must be canceled from this application if the office finds that the claims 1-6 and 21-23 under consideration are allowable and the application in condition for allowance.

Examiner Notes

3. Claims 1-6 and 21-23 are apparatus claims, and patentability of apparatus claims depends on the structure, not on the use or purpose of that structure; see Catalina, 62 USPQ2d at 1785. Apparatus claims must be structurally distinguishable from the prior art; see MPEP 2114. While features of an apparatus may be recited either structurally

or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In *re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In *re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); In *re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Furthermore, the manner of operating the device does not differentiate apparatus claims from the prior art. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim 1 recited that the apparatus was "for mixing flowing developer material" and the body of the claim recited "means for mixing ..., said mixing means being stationary and completely submerged in the developer material". The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly

rejected.).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodosky et al. (U.S. Publication Number: 2003/0184595), in view of Wewalaarachchi et al. (U.S. Publication Number 2002/0193888).

As to independent claim 1, Kodosky discloses an apparatus (e.g., industrial automation system) (see Figure 2B; and Paragraph [0047]), comprising:

a plurality of controllers (e.g., controllers) (see Paragraph [0003]), wherein each one of said plurality of devices includes device configuration software specifically adapting the device for creating or updating device configuration data (e.g., configuration dialog useful in creating a configuration diagram; discover or manually add new devices) (see Paragraph [0192]), the device configuration data including description of the device (e.g., configuration dialog for creating and specifying a configuration diagram) and representation of interconnection and interaction of the device with other ones of said plurality of devices (e.g., discovering devices connected within the system) (see Paragraph [0295]);

a computer network (e.g., LAN/WAN/Internet) (see Figure 1);

means connected between said computer network and said plurality of controllers, respectively, for transferring data and/or control signals between individual ones of said plurality of controllers and said computer network at given times (e.g., signals, data or phenomena that is being transferred between the devices) (see Paragraph [0217]); and

auto-discovery software (e.g., discovering devices connected within the system; Plug & Play) (see Paragraph [0295] and [0016]) specifically adapting a SCADA system (e.g., supervisory control and data acquisition) (see Paragraph [0125]) to be capable of both self-configure itself (e.g., configuring) (see Abstract) relative to said devices in said equipment network (e.g., discovering devices connected within the system) (see Paragraph [0295]), and to be updated relative to changes in the configuration of said equipment, and associated devices or equipment therein (e.g., discover or manually add new devices) (see Paragraph [0192]), including discovering new or changed devices via communication of the device configuration data over said computer network (e.g., discovered devices) (see Figure 14).

Kodosky clearly teaches a plurality of controllers (e.g., controllers) (see Paragraph [0003]), but does not mention dedicated controllers. Wewalaarachchi teaches each controller being dedicated to a corresponding one of a plurality of devices, respectively wherein each dedicated controller is specifically configured to provide the device to which the controller is dedicated with control and data functions (e.g., dedicated controllers which will make the changes to actuators and ultimately the process) (see Wewalaarachchi: Paragraph [0002]) to adapt the device to be capable of

interacting with other of the devices in an equipment network (e.g., plurality of network-based devices) (see Wewalaarachchi: Figure 1; and Kodosky: Paragraph [0003]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized dedicated controllers as taught by Wewalaarachchi to the controllers of Kodosky because the dedicated controllers will make the changes to actuators and ultimately the process; and the SCADA network therefore connects to many controllers and field devices to gather information and make global decisions (see Wewalaarachchi: Paragraph [0002]).

As to independent claim 5, Kodosky discloses an apparatus (e.g., industrial automation system) (see Figure 2B; and Paragraph [0047]), comprising:

a plurality of controllers (e.g., controllers) (see Paragraph [0003]), wherein each one of said plurality of devices includes device configuration software specifically adapting the device for creating or updating device configuration data (e.g., configuration dialog useful in creating a configuration diagram; discover or manually add new devices) (see Paragraph [0192]), the device configuration data including a description of the device (e.g., configuration dialog for creating and specifying a configuration diagram) and a representation of interconnection and interaction of the device with other ones of said plurality of devices (e.g., discovering devices connected within the system) (see Paragraph [0295]);

a computer network (e.g., LAN/WAN/Internet) (see Figure 1) connecting the plurality of controllers each other (e.g., signals, data or phenomena that is being

transferred between the devices) (see Paragraph [0217]) and to a SCADA system (e.g., supervisory control and data acquisition) (see Paragraph [0125]);

auto-discovery software (e.g., discovering devices connected within the system; Plug & Play) (see Paragraph [0295] and [0016]) specifically adapting the SCADA system (e.g., supervisory control and data acquisition) (see Paragraph [0125]) to be capable of both self-configure itself (e.g., configuring) (see Abstract) relative to said devices in said equipment network (e.g., discovering devices connected within the system) (see Paragraph [0295]), and to be updated relative to changes in the configuration of said equipment (e.g., discover or manually add new devices) (see Paragraph [0192]), and associated devices or equipment therein, including discovering new or changed devices via communication of the device configuration data over said computer network (e.g., discovered devices) (see Figure 14);

broadcast software (e.g., wireless protocols; various standard bus protocols) (see Paragraph [0097] and [0232]) specifically adapting a controller of a given device (e.g., controllers) (see Paragraph [0003]), that has either changed its configuration or is new to said equipment network (e.g., discover or manually add new devices) (see Paragraph [0192]), to broadcast over said computer network an auto-discovery protocol (e.g., wireless protocols; various standard bus protocols) (see Paragraph [0097] and [0232]);
and

a server included in said SCADA system (e.g., supervisory control and data acquisition) (see Paragraph [0125]) and capable of being responsive to an auto-discovery protocol from said given device (e.g., wireless protocols; various standard bus

protocols) (see Paragraph [0097] and [0232]), and capable of requesting said controller of said given device for the device configuration data to render said SCADA system able to update its configuration for the given device itself and within the equipment network (e.g., discovered devices) (see Figure 14).

Kodosky clearly teaches a plurality of controllers (e.g., controllers) (see Paragraph [0003]), but does not mention dedicated controllers. Wewalaarachchi teaches each controller being dedicated to a corresponding one of a plurality of devices, respectively wherein each dedicated controller is specifically configured to provide the device to which the controller is dedicated with control and data functions (e.g., dedicated controllers which will make the changes to actuators and ultimately the process) (see Wewalaarachchi: Paragraph [0002]) to adapt the device to be capable of interacting with other of the devices in an equipment network (e.g., plurality of network-based devices) (see Wewalaarachchi: Figure 1; and Kodosky: Paragraph [0003]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized dedicated controllers as taught by Wewalaarachchi to the controllers of Kodosky because the dedicated controllers will make the changes to actuators and ultimately the process; and the SCADA network therefore connects to many controllers and field devices to gather information and make global decisions (see Wewalaarachchi: Paragraph [0002]).

As to dependent claim 2, the combination of Kodosky and Wewalaarachchi teaches the apparatus of claim 1, wherein Kodosky teaches said plurality of controllers

are each provided by a programmable logic controller (e.g., PLCs) (see Paragraph [0003]).

As to dependent claim 3, the combination of Kodosky and Wewalaarachchi teaches the apparatus of claim 1, wherein Kodosky teaches said transfer means is selected from the group consisting of a router, and switch (e.g., routers, switches) (see Paragraph [0100] and [0133]).

As to dependent claim 4, the combination of Kodosky and Wewalaarachchi teaches the apparatus of claim 1, wherein Kodosky teaches said computer network consists of a local area network (e.g., LAN) (see Figure 1).

As to dependent claim 6, the combination of Kodosky and Wewalaarachchi teaches the apparatus of claim 1, wherein Kodosky teaches said auto-discovery means includes:

server means included in said SCADA system and connected to said computer network (e.g., discovering devices connected within the system) (see Paragraph [0295]; and Figure 14), for in a first mode of operation periodically polling respective controllers of all of said plurality of devices in said industrial equipment network for any respective changes in configuration and identification of new ones of said plurality of devices (e.g., discover or manually add new devices) (see Paragraph [0192]), and in a second mode of operation individually requesting each responding one of said plurality of devices for the device configuration data to permit said SCADA system to update its configuration information (e.g., discover or manually add new devices) (see Paragraph [0192]).

As to dependent claim 21, the combination of Kodosky and Wewalaarachchi teaches the apparatus of claim 1, wherein Kodosky teaches the device configuration means includes a configuration tool for allowing a user to enter operating parameters of the device, and creating a device configuration file based on the operating parameters (e.g., configuration dialog for creating and specifying a configuration diagram) (see Paragraph [0295]; and Figure 14).

As to dependent claim 22, the combination of Kodosky and Wewalaarachchi teaches the apparatus of claim 21, wherein Kodosky teaches the device configuration file is organized as a hierarchy (e.g., hierarchy) (see Paragraph [0012]).

As to dependent claim 23, the combination of Kodosky and Wewalaarachchi teaches the apparatus of claim 1, wherein Kodosky teaches the plurality of controllers are configured such that the device configuration data (e.g., controllers) (see Paragraph [0003]), in its entirety, is communicated to said SCADA system (e.g., supervisory control and data acquisition) (see Paragraph [0125]) while only relevant part of the device configuration data is communicated to other ones of said plurality of devices in the equipment network (e.g., distributed system) (see Paragraph [0125]).

Response to Arguments

6. Applicant's amendment and arguments filed September 7, 2010 have been fully considered. The amendments/arguments do not overcome the original art rejection and the arguments are not persuasive. The following are the Examiner's observations in regard thereto.

Applicant Argues:

Respectfully, Applicants submit that the Examiner has not properly characterized the teachings of the references and/or the claims at issue. Accordingly, a prima facie case of obviousness has not been established.

Examiner Responds:

Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, the differences between the prior art and the claims in issue have been set forth. The level of ordinary skill in the art is deemed to be a person who is presumed to be aware of all prior art, specifically relating to self-configuring SCADA. The rejection is based on what was known prior to the time the Applicant created the invention and rest on a factual basis, and supported by the motivation as noted in the above office action.

Applicant Argues:

While paragraph [0003] discloses in general the use of various "intelligent devices" there is no disclosure of the above-referenced claim limitation.

While paragraph [0192] discloses the GUI of a computer system having a configuration dialog, there is no disclosure of the above-referenced claim limitation.

Once again, while paragraph [0295] discloses configuration dialog, there is no disclosure of the above-referenced claim limitation.

Examiner Responds:

Examiner is not persuaded. See office action above for prior art examples of claimed limitations. Under such considerations, the prior art teaches the claims as written.

Applicant Argues:

The "controllers" of Wewalaarachchi are not the claimed controllers because they do not "adapt the device to be capable of interacting with other of the devices in an equipment network" in accordance with the limitations of independent claims 1 and 5.

Examiner Responds:

Examiner is not persuaded. In fact, both references teach the claimed limitation, "adapt the device to be capable of interacting with other of the devices in an equipment network (e.g., plurality of network-based devices) (see Wewalaarachchi: Figure 1; and Kodosky: Paragraph [0003])."

Applicant Argues:

Kodosky teaches a system in which the devices are aware of their own type, but not of their interaction and interconnection with other devices and the system. Similarly, Wewalaarachchi discloses a method of using an as-built drawing to configure a SCADA system (Abstract). It does not appear that the devices in Wewalaarachchi are even aware of their own type, never mind their interaction and interconnection with other devices and systems.

Examiner Responds:

Examiner is not persuaded. In addition to the office action above, see prior art Kodosky Paragraph [0295] and [0016] for examples (e.g., discovering devices connected within

the system) of the claimed "interaction and interconnection with other devices and the system." Under such considerations, the prior art teaches the claims as written.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tejal J. Gami whose telephone number is (571) 270-1035. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Unit 2121

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